

POPULATION CALCULATION SHEET

1 Population of City (or Other Municipality)

4030 People

Burnham

Year 1980

Mile 3

2 Area of City (Planimeter Reading)

13.68 Square Inches

3 Population Density [**1**+**2**]

295 People per Square Inch

4 Average Persons per House (Census)

2.75 Year 1980

5 Area of City Within Radius (Planimeter Reading)

1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
				13.05	
					3850

6 Population of City Within Radius [**5** x **3**]

7 House Count Within Radius, Outside City

8 Population From House Count [**7** x **4**]

9 Total Population Within Radius [**6** + **8**]

ERROR CHECK:

10 Area of City Outside 4 miles

_____ Square Inches

11 Population of City Outside of 4 miles [**10** x **3**] _____ People

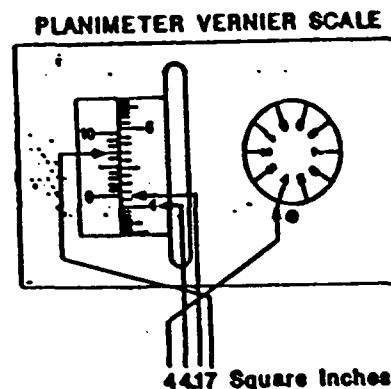
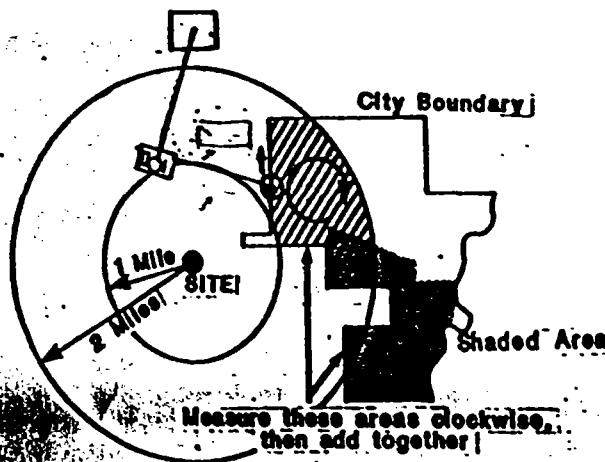
12 Population of City (\sum **6** + **11**)

_____ People = 1

EPA Region 5 Records Ctr.



288551



POPULATION CALCULATION SHEET

Chicago

[1] Population of City (or Other Municipality)

3005072 People

Year 1980

[2] Area of City (Planimeter Reading)

1642.32 Square Inches

[3] Population Density [1+2]

1830 People per Square Inch

[4] Average Persons per House (Census)

2.75 Year 1980

[5] Area of City Within Radius (Planimeter Reading)

1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
2205	6615	2,646	9.47	29.06	44.33
404	1210	4842	17330	53180	81124

[6] Population of City Within Radius [5 x 3]

[7] House Count Within Radius, Outside City

[8] Population From House Count [7 x 4]

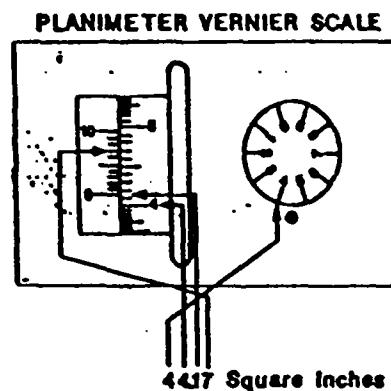
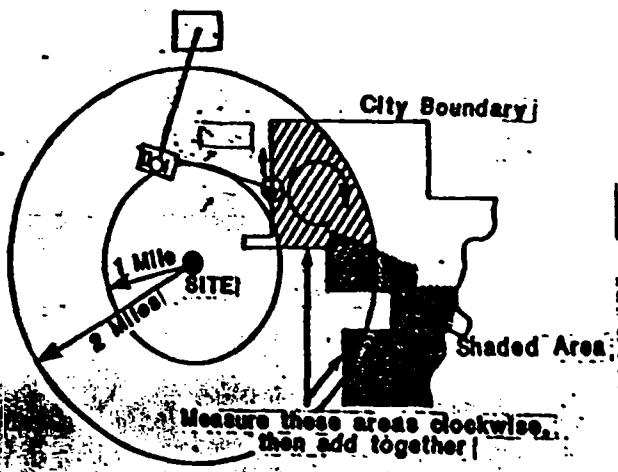
[9] Total Population Within Radius [6 + 8]

ERROR CHECK:

[10] Area of City Outside 4 miles _____ Square Inches

[11] Population of City Outside of 4 miles [10 x 3] _____ People

[12] Population of City (Σ [1] + [11]) _____ People = [1]



POPULATION CALCULATION SHEET

East Chicago

① Population of City (or Other Municipality)

5347 People

Year 1980

② Area of City (Planimeter Reading)

15.12 Square Inches

③ Population Density [①+②]

354 People per Square Inch

Mile 4

④ Average Persons per House (Census)

2.75

Year 1980

⑤ Area of City Within Radius (Planimeter Reading)

1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
					13.89
					49.7

⑥ Population of City Within Radius [⑤ x ③]

⑦ House Count Within Radius, Outside City

⑧ Population From House Count [⑦ x ④]

⑨ Total Population Within Radius [⑥ + ⑧]

ERROR CHECK:

⑩ Area of City Outside 4 miles

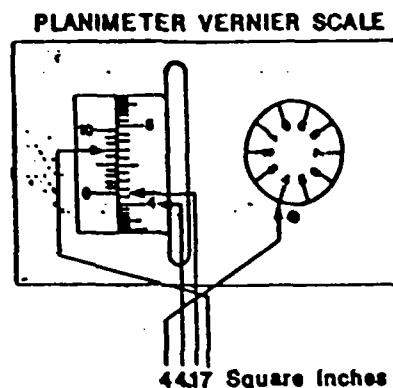
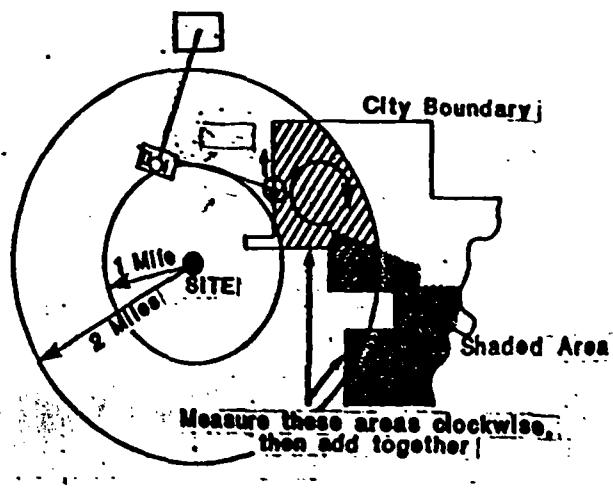
_____ Square Inches

⑪ Population of City Outside of 4 miles [⑩ x ③]

_____ People

⑫ Population of City [\sum ⑨ + ⑪]

_____ People = ①



POPULATION CALCULATION SHEET

Hammond,

① Population of City (or Other Municipality)

93714 People

Year 1980

② Area of City (Planimeter Reading)

203.76 Square Inches

4 mile.

③ Population Density [① ÷ ②]

460 People per Square Inch

④ Average Persons per House (Census)

2.96

Year _____

⑤ Area of City Within Radius (Planimeter Reading)

1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
					18.12
					8335

⑥ Population of City Within Radius [⑤ x ③]

⑦ House Count Within Radius, Outside City

⑧ Population From House Count [⑦ x ④]

⑨ Total Population Within Radius [⑥ + ⑧]

ERROR CHECK:

⑩ Area of City Outside 4 miles

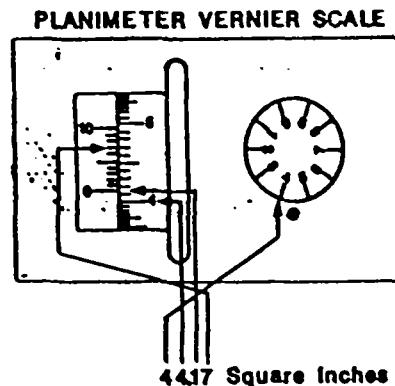
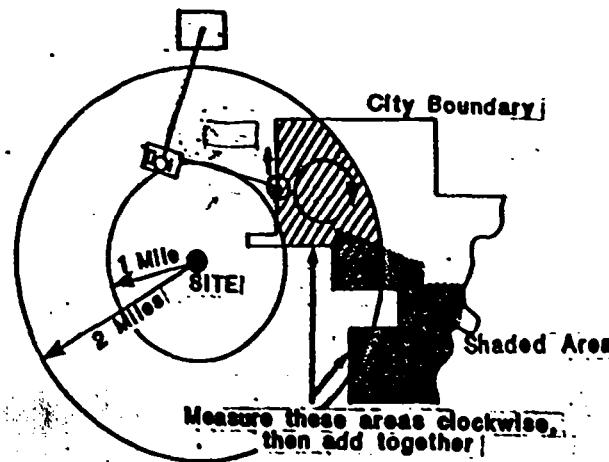
_____ Square Inches

⑪ Population of City Outside of 4 miles [⑩ x ③]

_____ People

⑫ Population of City [\sum ⑨ + ⑪]

_____ People $\stackrel{?}{=}$ ①



POPULATION CALCULATION SHEET

Calvert + Dalton.

① Population of City (or Other Municipality)

64463 People

Year 1980

4 mile

② Area of City (Planimeter Reading)

92.16 Square Inches

③ Population Density [①+②]

699.47 People per Square Inch

④ Average Persons per House (Census)

2.75

Year 1980

⑤ Area of City Within Radius (Planimeter Reading)

1/4 mile	1/2 mile	1 mile	2 miles	3 miles	4 miles
					34.67
					24250

⑥ Population of City Within Radius [⑤ x ③]

⑦ House Count Within Radius, Outside City

⑧ Population From House Count [⑦ x ④]

⑨ Total Population Within Radius [⑥ + ⑧]

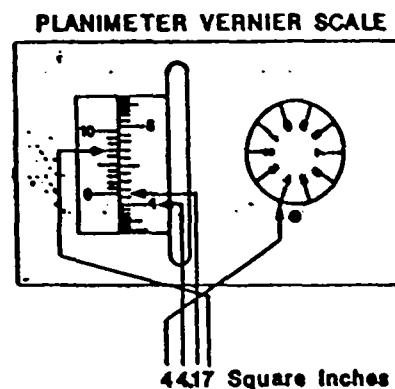
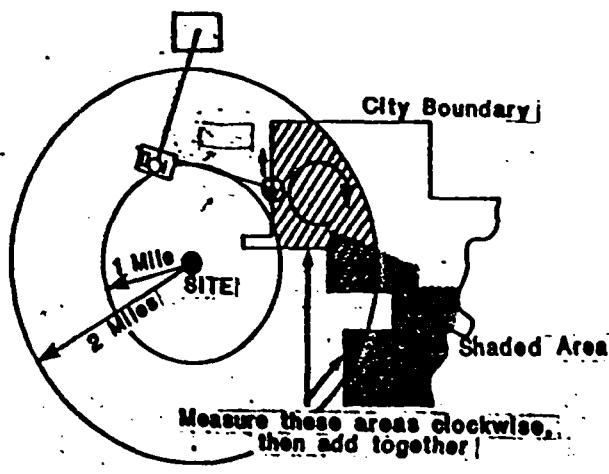
ERROR CHECK:

⑩ Area of City Outside 4 miles

_____ Square Inches

⑪ Population of City Outside of 4 miles [⑩ x ③] _____ People

⑫ Population of City [Σ ⑨ + ⑪] _____ People = ①





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Population Computation

Population of Chicago, Illinois 1982 = 2,940,000
Square miles = 228.135

12887.11 People/mile² x % of Radius

$$A = \pi R^2$$

$$\begin{aligned}0-1 \text{ mile} &= 3.14 \text{ mile}^2 = 3.14 \\&= 40,466 \times 0.125 = 5058\end{aligned}$$

$$\begin{aligned}0-2 \text{ miles} &= 3.14 (2 \text{ mile})^2 = 12.56 \text{ m}^2 \\&= 161,862 \times .25 = 40465\end{aligned}$$

$$\begin{aligned}0-3 \text{ miles} &= 3.14 (3 \text{ mile})^2 = 28.26 \text{ m}^2 \\&= 364,189 \times .33 = 120,182\end{aligned}$$

$$\begin{aligned}0-4 \text{ miles} &= 3.14 (4 \text{ mile})^2 = 50.24 \text{ m}^2 \\&= 647,448\end{aligned}$$